

WHAT IS CLAIMED IS:

1. A method for identifying destination nodes of a multicast session in a network having a plurality of nodes, comprising:

forming a circularly linked list comprising a plurality of destination
5 node entries each having an associated address;

identifying an address for entering the list at an initial destination
node entry;

traversing the linked list; and

terminating the traversing step prior to reaching the initial
10 destination node entry.

2. The method of claim 1 further comprising receiving data
intended for transmittal to the identified destination nodes of the
multicast session.

3. The method of claim 2 wherein the initial destination node
15 entry is determined from the received data.

4. The method of claim 2 wherein at least one destination node
of the list, as determined from the received data, is excluded from the
multicast session.

5. The method of claim 4 wherein the received data includes an
20 indicator identifying the destination node that is to be excluded from the
multicast session.

6. The method of claim 5 wherein the indicator identifies the
destination node from which the data was received as the destination node
to be excluded from the multicast session.

7. The method of claim 1 wherein the initial destination node
25 entry is predetermined.

8. The method of claim 1 further comprising receiving data
intended for transmittal to the identified destination nodes of the
multicast session on an input port, and wherein the initial destination
30 node entry is determined based on the input port.

9. The method of claim 1 wherein the address for entering the list is the destination node from which the data was received

10. The method of claim 1 wherein the traversed destination node entries are the identified destination nodes of the multicast session.

5 11. The method of claim 1 wherein destination node entries for a plurality of multicast sessions are interleaved in a list, and wherein the destination node entries for each one of the plurality of multicast sessions are circularly linked .

10 12. The method of claim 1 wherein each destination node entry includes link information, and wherein the step of traversing the linked list comprises traversing the linked list according to the link information at each destination node entry.

15 13. The method of claim 12 wherein the link information comprises a pointer at each destination node entry that points to another destination node entry such that the plurality of destination node entries are circularly linked.

14. A method for identifying the destination nodes for a multicast session in a network having a plurality of nodes, comprising:

20 forming a multicast group list comprising a circularly linked plurality of destination node entries, wherein each destination node entry includes link information;

receiving data intended for transmittal to the destination nodes of the multicast session;

25 entering the list at an initial destination node entry as determined from the received data;

traversing the list according to the link information;

determining when the traversing step returns to the initial destination node entry; and

30 terminating the traversing step prior to reaching the initial destination node.

15. An apparatus for identifying destination nodes of a multicast session in a network having a plurality of nodes, comprising:

a circularly linked list comprising a plurality of destination node entries, wherein the contents of each destination node entry include an associated destination address and data transmission parameters;

a processing engine for identifying an initial destination entry for entering the list and for traversing the linked list until the initial destination node entry is reached to ; and

terminating the traversing step prior to reaching the initial destination node entry.